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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/443,202	11/18/1999	GREGORY DAVID DOOLITTLE	EN999058	6901

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EXAMINER

WILLETT, STEPHAN F

ART UNIT	PAPER NUMBER
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2141

17

DATE MAILED: 04/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/443,202

Applicant(s)

DOOLITTLE ET AL.

Examiner

Stephan F Willett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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DETAILED ACTION

*Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 27, 53 and 59 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, “without input from said first requestor or said second requestor” in the claims are not enabled by “without human intervention and/or client code”, pg. 14, line 16-17 in the specification since the requesters are not mentioned and a requester/client process or client subprocess is not a user as taught by “human intervention”.

*Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 27, 53 and 59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The requesters that do not provide input is unclear in combination with the specification’s teaching “without” “client code” since some process must

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provide input to “dynamically alter” the pools. Also, it is unclear how a deadlock is avoided and that a deadlock is present in the claims.

***Claim Rejections - 35 USC § 103***

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 3-4, 9-11, 14-18, 21-22, 27, 29-30, 35-37, 40-44, 47-48, 53-56, 58, 60-61, 66-68 and 70-75, 78-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schoening et al. with Patent Number 6,202,465 in view of Belkin et al. with Patent Number 6,542,920.

8. Regarding claim(s) 1, 27, 53, 58, Schoening teaches a manipulation of threads within a computer network. Schoening teaches receiving a 1st request, col. 35, lines 26-27. Schoening teaches the 1st request waiting for a response from a 2nd request, col. 35, lines 27-28 and

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“declares ‘pre-conditions’ that represent one or more dependencies of the Service Module Function on another Service Module Function”, col. 22, lines 65-67. Schoening teaches selecting from a thread pool, col. 41, lines 25-34 and col. 23, lines 22-25 which teaches that the execution order dictates which threads are necessary. Schoening teaches altering thread pools as “the timeBase providing the partial order of Service Module Functions needed to effectuate the needed services is selected”, col. 42, lines 22-24 based on the synchronized threads, col. 40, lines 61-62, and col. 41, lines 39-42 and as a partial order, col. 41, lines 3-14. Schoening teaches avoiding deadlocks, col. 3, lines 24-30, col. 54, lines 1, 12-13 and in Belkin at col. 16, lines 4-8 as “no free threads available”, etc. Schoening teaches ignoring input from requesters as “independent groups”, col. 40, lines 65-67. Schoening teaches the invention in the above claim(s) except for explicitly teaching dynamically altering existing eligible thread pools to serve a request and setting a mask with the response. In that Schoening operates to generate multiple threads the artisan would have looked to the networking arts for details of implementing thread allocation. In that art, Belkin, a related network thread adapter, teaches “the server implements multiple thread pools”, col. 4, lines 38-39 in order to process a request or a response. Belkin specifically teaches “this evaluation function ... may be user invoked to evaluate a request when one or more condition are satisfied”, col. 15, lines 33-35. Dynamically determining different eligible thread groups or process configurations to complete a request is taught by the evaluation of a function to determine which thread pools are appropriate to service the request. Belkin specifically teaches “each row of table specifies one association between a particular thread pool and a particular type of service”, col. 7, lines 41-42. The request or response is associated or

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masked to a particular thread pool. Further, Belkin suggests that “it is the request processing mechanism that is primarily responsible for invoking the evaluation function associated with a thread pool”, col. 16, lines 44-46 which results from implementing his thread groupings functions to create new eligible pools. The motivation to incorporate dynamic thread groupings with masking insures that deadlocks, efficient processing, among other delays are overcome with related request types. Thus, it would have been obvious to one of ordinary skill in the art to incorporate the dynamic grouping of threads and masking as taught in Belkin into the network described in the Schoening patent because Schoening operates with threads and Belkin suggests that optimization can be obtained by manipulating thread pools and request types. Therefore, by the above rationale, the above claim(s) are rejected.

9. Regarding claims 29, 60, 70, Belkin teaches masking thread pools as “each row of table specifies one association between a particular thread pool and a particular type of service”, col. 7, lines 41-42. Thus, the above claim limitations are obvious in view of the combination.

10. Regarding claims 4, 61, Schoening teaches alter processing when a wait state is recognized, col. 39, lines 65-67. Thus, the above claim limitations are obvious in view of the combination.

11. Regarding claims 9, 35, 66, Schoening teaches altering thread groups for other parallel processes, col. 40, lines 36-38. Thus, the above claim limitations are obvious in view of the combination.

12. Regarding claims 10-11, 36-37, 67-68, Schoening teaches thread pools based on call backs, col. 15, lines 46-48 and col. 16, lines 7-8. Thus, the above claim limitations are obvious

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in view of the combination.

13. Regarding claims 14-15, 18, 40-41, 44, 54, 71-72, 75, Schoening teaches requests at servers, col. 7, lines 748-50. Thus, the above claim limitations are obvious in view of the combination.

14. Regarding claims 16-17, 42-43, 73-74, Schoening teaches client on the same or different computer, col. 39, lines 51-60. Thus, the above claim limitations are obvious in view of the combination.

15. Regarding claims 21-22, 47-48, 55-56, 78-79, Schoening teaches the same or different requesters, col. 18, lines 6-14. Thus, the above claim limitations are obvious in view of the combination.

### *Response to Amendment*

16. The broad claim language used is interpreted on its face and based on this interpretation the claims have been rejected.

17. The limited structure claimed, without more functional language, reads on the references provided. Thus, Applicant's arguments can not be held as persuasive regarding patentability.

18. Applicant suggests "Schoening determines, with input" that "SMFs receive parameters from clients", Paper No. 16, Page 13, lines 5-6, 11. However, the claims state requesters meaning initial client/requester which are different than the numerous other clients or subclients used in creating a pool such as EvalGroup, SMF, etc. These clients are not requesters and as noted above there must be some input from something to dynamically create a pool, such as the

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thread pools. Thus, Applicant's arguments can not be held as persuasive regarding patentability.

19. Applicant suggests "Schoening does not suggest or imply the avoidance of deadlock with a request awaiting a response", Paper No. 16, Page 13, lines 23-24. First, there is no deadlock presented in the claims and the claim language contradicts that a deadlock is present since the request is "waiting" which is not a deadlock situation. In this regard, the applicant argues "efficient", Paper No. 16, Page 12, line 9 which based on the above reading correlates with processing efficiencies, not deadlock. Also, the "waiting" argued above is the same as the "queue", Paper No. 16, Page 15, line 8 for a dependent thread argued. Thus, Applicant's arguments can not be held as persuasive regarding patentability.

20. Applicant suggests "the determination in Belkin of which thread pool to use is performed with input from a user", Paper No. 16, Page 15, lines 1-2. However, as discussed above, a user is different from client/requester as argued with "without input from a requester[/client]". Also, note no user input is required at "initialization", col. 8, lines 47-50, but also that "the initial number of threads specified" which is not static and changes as demand changes in Belkin implies the thread pools change. Belkin also describes numerous dynamic processes for example functions, col. 15, lines 33-36 which are not only evaluated at initialization to determine pool makeup. Thus, Applicant's arguments can not be held as persuasive regarding patentability.

21. Applicant suggests "without input", Paper No. 16, Page 13, line 4. "[The] specification, having described the whole, necessarily described the part remaining", In re Johnson, 558 F.2d 1008, 1019, 194 USPQ 187, 196 (CCPA 1977), see also Ex parte Grasselli, 231 USPQ 393 (Bd, App. 1983) and negative limitations "tended to define the invention in terms of what it was not,



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rather than pointing out the invention”, MPEP 2172.05(I). A negative type limitation, that implicitly teaches other related parts remaining, to avoid obvious elements of a reference does not exude novelty of the whole. Simple “dynamic altering” is claimed which reads on altering the pools at initialization which does not require user input. It is suggested that further inquiry into how the altering occurs be introduced. Simply altering a thread pool without more does not improve system performance it just shuffles the threads into different groupings, unless for example, all threads in the pools are busy, etc. The references should not be read in a vacuum, the teachings are not mutually exclusive, and must be taken in context of what was reasonable based on the subject matter as a whole as would have been understood at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. The significance of the breadth of the claims’ language needs to be appreciated. The description in the reference is not obfuscated by the numerous other suggested usages of said description in the reference. Thus, Applicant’s arguments can not be held as persuasive regarding patentability.

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*Conclusion*

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is disclosed in the Notice of References Cited. A close review of the references is suggested. A close review of the Maresco reference with Patent Number 6,418,458, col. 3, lines 55-56 and Robsman with Patent Number 6,477,561 teaches which dynamic determination of at least one thread pool, is suggested. The other references cited teach numerous other ways to perform thread pooling and note the look up tables disclosed are essentially thread pools based on row or column type groupings in table format with Ids, etc., i.e. Miller reference with Patent Number 6,684,262, thus a close review of them is suggested.

23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

24. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephan Willett whose telephone number is (703) 308-5230. The examiner

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can normally be reached Monday through Friday from 8:00 AM to 6:00 PM.

26. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia, can be reached on (703) 305-4003. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7239.

27. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9605.

sfw

March 2, 2004

  
RUPAL DHARIA  
SUPERVISORY PATENT EXAMINER

Continuation of Disposition of Claims: Claims pending in the application are 1,3,4,9-11,14-19,21,22,27,29,30,35-37,40-44,47,48,53-56,58,60,61,66-68,75,78 and 79.

Continuation of Disposition of Claims: Claims rejected are 1,3,4,9-11,14-19,21,22,27,29,30,35-37,40-44,47,48,53-56,58,60,61,66-68,75,78 and 79.